

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 31 JAN 2005

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To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GR2004/000047

International filing date (day/month/year)
01.10.2004

Priority date (day/month/year)
02.10.2003

International Patent Classification (IPC) or both national classification and IPC
B21F3/10

Applicant
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GR2004/000047

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GR2004/000047

Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-10
	No: Claims	
Inventive step (IS)	Yes: Claims	1-10
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the International application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V.

- 1 The following documents are referred to in this communication:
D1 : EP 0 044 464 A (NHK SPRING CO LTD) 27 January 1982 (1982-01-27)
D2 : DATABASE WPI Week 1983 Derwent Publications Ltd., London, GB; AN
1983-818883 XP002314067 & SU 988 430 A (MOROZOV LEV. P) 15
January 1983 (1983-01-15)
- 2 The steps of first producing a spring of a diameter and a pitch equal or smaller than the smallest diameter or pitch of the final spring, and then establishing the final diameter and final pitch by pressing the initial spring turns radially outwardly and in the axial direction of the spring are not known from the prior art. Springs of varying diameter and pitch can thereby be manufactured easily.

Document D1 shows a process for manufacturing springs of varying diameter. But in this process the diameter is varied at the moment of producing the spring by varying the positions of pressing rollers.

The subject-matter of claim 1 is considered to be new and inventive (Article 33(2) and 33(3) PCT).

- 2.1 Claims 2-5 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

- 3 Document D2, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):

System of production of springs of wire of circular or other cross-sectional area consisting of a central revolving roller (6) onto which are contacting with pressure perimetricaly other rollers (28) more than one (three), so as to encapsulate it, as to pull and bend the wire creating an initial spring (see abstract and figures 1 and 2).

From this, the subject-matter of independent claim 6 differs in that:

the system further includes an elbow member with a suitable pin at its one end, that is adapted to contact the emerging spring turn from its inner and lower side, where the elbow is connected to an axle that is resting on a suitable base, which can rotate controllably around its axis, thereby moving the elbow with the pin towards the outside of the spring and can simultaneously move controllably along the direction of the axis of the spring.

By these distinguishing features, an enlarging of the diameter and the pitch of the initial spring is enabled. Consequently the system is adapted for carrying out the method of claim 1.

As no prior art document shows any means for enlarging diameter and pitch of an initially produced spring, the subject-matter of claim 6 is also considered to be new and inventive (Article 33(2) and 33(3) PCT).

- 3.1 Claims 7-10 are dependent on claim 6 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Re Item VII.

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D2 is not mentioned in the description, nor is this document identified therein.

Independent claim 6 is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D2) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).